

REMARKS

In the Office Action dated January 23, 2004, the Examiner objected to claim 13, rejected claims 1-3, 5, 12, 14 and 17 under 35 USC 102(e) as anticipated by Ishikawa (U.S. Patent 6,583,032), rejected claims 6-8 and 13 under 35 USC 103 as unpatentable over Ishikawa in view of Walker (U.S. Patent No. 6,275,277), rejected claim 9 under 35 USC 103 as unpatentable over Ishikawa in view of Hasegawa (U.S. Patent Publication 2003/0038343), rejected claims 10 and 15 under 35 USC 103 as unpatentable over Ishikawa and Ueta (U.S. Patent No. 6,590,919, and rejected claims 11 and 16 under 35 USC 103 over Ishikawa in view of Hahn (U.S. Patent No. 6,131,880). In response thereto, the applicants have amended claims 1, 8, 12, and 13 and cancelled claims 9 and 17. Claims 1-3, 5-8, and 10-16 remain at issue.

The Applicants have amended claim 13 to make it dependent on claim 12.

Ishikawa teaches a method of scribing wafers that involves, as illustrated in Figure 1, the steps of: (i) back-grinding the wafer; (ii) polishing the back surface of the wafer; (iii) forming grooves to a "predetermined depth" on the back surface of the wafer along the saw streets (see Col. 3, lines 10-19); and (iv) singulating the individual die from the wafer using a roller to apply pressure to the wafer. The pressure causes the wafer to break along the grooves in the saw streets (see Col. 4, lines 22-35).

Ishikawa further teaches the use of an infrared irradiating device to locate the saw streets on the wafer. The locations are then provided to a diamond cutter which is used to cut the grooves to the predetermined depth along the saw streets on the wafer. See Col. 3, lines 41-59.

Ishikawa therefore does not anticipate claim 1 in several regards:

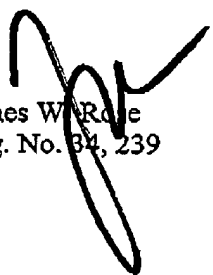
- i. Ishigawa fails to teach or suggest the application of an opaque material onto the wafer;
- ii. Since there is no opaque material formed on the wafer, Ishigawa fails to teach or suggest the imaging of the wafer through an opaque material; and

iii. Ishigawa teaches the formation of "grooves" having a "predetermined depth". The grooves cause the wafer to break along the saw streets when pressure is applied to the wafer. Ishigawa therefore actually teaches away from the present invention as claimed which calls for the dicing of the wafer to singulate the individual die on the wafer.

The Applicants therefore submit that claim 1 is allowable. Although patentable in their own right, claims 2, 3 and 5-8 and 10-11 are allowable based on their dependency on claim 1. Similarly, claims 12-16 are allowable for essentially the same reasons as provided above with regard to claim 1.

Applicant believes that all pending claims are allowable and respectfully requests a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

Respectfully submitted,
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